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NUTRITION PROGRAM NEWS

U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

SEPTEMBER-DECEMBER 1976

Nutrition Education

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Dr. Mary M. Hill until her retirement in 1975 had as one of her responsibilities the development and publication of Nutrition Program News. We are indebted to her for this issue of Nutrition Program News.

Most American educators would agree that one aim of education is to prepare our people to live effectively in a free society. It is also generally agreed that health influences effectiveness; especially if health is defined as a state of complete physical, mental, and social well-being rather than mere freedom from disease. If this is so, then nutrition defined as "the control of health insofar as it is affected by the food we eat" becomes a concern of educators.

If the health of a nation is important to national survival, then health instruction should be provided for all people at a time of life when it will be most likely to effect behavioral changes in health functions. Most educators have found that children's habits are most easily influenced in the early years. Although one is never too old to learn, it sometimes takes much longer.

Personal observation in communities across the country reveals that many community programs are in operation but very few schools give systematic attention to the nutritional aspects of health. During the past 60 years, attempts have been made to include nutrition in elementary school programs. Throughout these years our knowledge of the science of nutrition has grown more rapidly than our ability

to persuade school administrators that the inclusion of suitable interpretations of nutrition and education toward the development and maintenance of desirable food habits in school programs is well worth the cost.

In this issue of Nutrition Program News we will recall some of the highlights in the development of sound programs, something about the situation today, and what seems to remain to be accomplished.

HIGHLIGHTS IN THE DEVELOPMENT OF NUTRITION EDUCATION

Establishments of the Relationship of Nutrition to Health

Man's interest in food and what happens to it in the human body dates back as far as we have records. This interest, however, remained in the realm of the philosophical until scientific facts were validated and principles formulated in several fields of science, such as physics and chemistry, which became the basis of the science of nutrition.

The contributions of scientists, such as Lavoisier, Lusk, Benedict, Atwater, Rose, Rubner, and countless others, provided our early understandings of combustion, metabolism, and food composition. The development of various types of respiration apparatus also contributed to our knowledge of the relationship of nutrition to the health of man.

As the body of knowledge grew, questions arose concerning the functions, utilization, human requirements, and sources of nutrients. Then evidence, which threw light on this area of inquiry, provoked more questions concerning interrelationships among the various nutrients. Research has

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continued in all these areas down to the present time, but unknowns and areas that are not clearly understood still exist.

Laboratories both in the United States and abroad have conducted and reported numerous carefully controlled studies which have helped to establish the basic principles of nutrition. Other carefully controlled studies have established their application to human health.

Aids in the Development of School and Community Programs

In the early 1900's investigators, using the knowledge available, attempted to put the facts into practice to improve the nutritional health of people. Three areas of information were needed before recommendations for improvement could be made. First, some knowledge of human requirements for the known nutrients was essential. Second, information about food composition was needed. The first tables of food composition had been compiled by Atwater with the help of Woods and were published in 1896, titled "The Chemical Composition of American Food Materials." Third, was information on food consumption--what foods in what quantities were being consumed. Many small studies of particular population groups were made and food guides were developed. Research in all these areas continues and the body of knowledge continues to grow.

These early investigators made recommendations and also made some evaluations to determine the effectiveness of their efforts. One of the earliest studies was conducted by the Society for Improvement of Conditions of the Poor. The study was initiated in 1914 in New York City and its purpose was to provide guidance to homemakers receiving welfare funds on how to obtain the most nutrition for the food dollar. Instruction was given in purchasing and preparing foods. After a 10-year period, a survey was made to evaluate the program. A study was made of the dietary practices of 100 families that had received instructions and compared them with those of a similar number of families who had not received instruction. The result of the study indicated that nutrition education programs are expensive, because they require a long period of time. However, when evaluated in terms of benefits accrued, they are well worth the cost.

Recommended Dietary Allowances (RDA's).—In the 1940's recommended dietary allowances were made for energy and those nutrients for which adequate data on human requirements and food sources were available. These recommendations were made in terms of calories and nutrients. It remained for the nutritionists to translate these values into kinds and amounts of food to have daily or weekly.

The RDA's are continuously under review and are updated periodically to take into account new knowledge

of nutrient requirements for human health. They provide a yardstick for evaluation of diets of population groups.

The great value to nutrition education is that investigators can now use the same yardstick for evaluation and a measure of consistency can exist in the recommendations made to people in all parts of the country.

Food guides.—Good diets can result from many different combinations of foods. The more one knows about food composition, the easier it is to make a great variety of food choices that will result in a good diet.

When dealing with people who have little knowledge of food composition, some rule of thumb is needed to help them make good choices. Reliable food guides have, over the years, provided this guidance. "Food for Fitness—A Daily Food Guide" is the most recent guide published by the U.S. Department of Agriculture. (See NPN March-April 1973).

This guide can also lend consistency to recommendations made throughout the country. It is based on our knowledge of human requirements, our knowledge of food sources of the nutrients the U.S. population is likely to choose, and our knowledge of the composition of foods. Furthermore, it is easy to use and does not require much time to roughly evaluate family diets.

It is, therefore, a guide that requires the fewest drastic changes in food habits. The fewer changes in food habits that are needed, the more likely the program will be effective.

Enrichment of bread, flour, and cereals.—In the 1940's it became apparent that although whole grain cereals and breads were recommended to achieve good food selections, the people continued to prefer and to buy the refined products. A recommendation was made to enrich these refined products with several nutrients that were lost in the refining process. This recommendation was made possible by the research that determined the chemical nature of these nutrients and the ability to synthesize them at a price that made the enrichment of cereals and flour reasonable.

Many States, although not all, passed enrichment laws. However, it is now possible to buy the enriched products virtually everywhere in the country.

School feeding.—As early as 1910, school officials were, in some places, supplementing skimpy or missing breakfasts by serving food to children in schools. Over the years various types of school feeding were initiated but not on a systematic basis that was possible after the enactment of the National School Lunch Act in 1946. This act enabled schools to receive help from the Federal government in providing children with a midday meal that met prescribed nutritional standards.

School feeding made it possible to extend the variety of foods that children would eat and made it possible for them

to have repeated experiences with desirable food practices—so important to the development of good eating habits. The school feeding program has an excellent potential for becoming an important educational tool if it is used for that purpose.

Basic concepts of nutrition for nutrition education.—In the 1950's and early 1960's many educational programs were initiated in schools and communities. Some were sound and, of course, some were not. People were getting their nutrition information from many sources including sources that were ready to bilk the public for cash.

Purveyors of sound nutrition principles became aware of a need for some guidelines for planning that could be used by all. A subcommittee of the Interagency Committee on Nutrition Education was charged to study the whole body of knowledge and sift out those ideas that were essential for *everyone* to know, comprehend, and use if high levels of nutritional health were to be achieved. Furthermore, these ideas were to be expressed in lay language.

After 2 years, in 1964, the Basic Concepts of Nutrition for Nutrition Education were published in Nutrition Program News. They read as follows:

1. Nutrition is the food you eat and how the body uses it.
 - ★ We eat food to live, to grow, to keep healthy and well, and to get energy for work and play.
2. Food is made up of different nutrients needed for growth and health.
 - ★ All nutrients needed by the body are available through food.
 - ★ Many kinds and combinations of food can lead to a well balanced diet.
 - ★ No food, by itself, has all the nutrients needed for full growth and health.
 - ★ Each nutrient has specific uses in the body.
 - ★ Most nutrients do their best work in the body with other nutrients.
3. All persons, throughout life, have need for the same nutrients but in varying amounts.
 - ★ The amounts of nutrients needed are influenced by age, sex, activity, and state of health.
 - ★ Suggestions for kinds and amounts of food needed are made by trained scientists.
4. The way food is handled influences the amount of nutrients in food, its safety, appearance, and taste.
 - ★ Handling means everything that happens to food while it is being grown, processed, stored, and prepared for eating.

Nutritionists all over the country used these concepts in planning and evaluating programs. They received publicity through Nutrition Program News and professional journals

and finally they were included in many textbooks that appeared in the late 1960's and early 1970's.

In the early 1970's a new subcommittee of the Interagency Committee on Nutrition Education was charged to review the concepts to be sure they were still consistent with the evergrowing body of nutrition knowledge and to revise if deemed necessary. The concepts were revised but only slightly.

1. Nutrition is the way the body uses food.
2. Food is made up of different nutrients needed for growth and health. Nutrients include proteins, carbohydrates, fats, minerals, and vitamins.
3. This concept was not changed but the second explanatory idea was deleted because it is not an essential concept.
4. The way food is handled influences the amount of nutrients in food, its safety, quality, appearance, taste, acceptability, and cost.

Nutrient labeling.—By the midsixties, demands were made for nutrition information about food composition to be made available to the public. The Food and Drug Administration set about to include this information on labeling of processed and packaged foods following recommendations of the 1969 White House Conference on Food, Nutrition and Health.

To simply list the known nutrient content of foods with the amounts available in each can or package would have been easy. However, this information would have been meaningless unless it was related to the needs of individuals. To simplify such complicated information to fit on a food label was a monumental task. The resulting plan was somewhat of an oversimplification but does give some idea of the nutrient value of specific foods for those who choose to use it. For the housewife to use it as a means of evaluating the diets of various members of her family requires further interpretation and is time-consuming.

Food assistance programs.—Nutrition education never can be fully effective if people do not have the money to buy a good diet. Over the years, there have been many family assistance programs at Federal, State, and local levels. The current Federal programs that provide food assistance include the Food Stamp Program, Special Supplemental Food Program (WIC Program), and National Nutrition Program for the Elderly. The Food Stamp Program provides the possibility for eligible families with little or no income to obtain free food stamps and other eligible families to purchase food stamps that gives the family more purchasing power than the stamps cost. The WIC Program provides supplemental food for infants, children up to 5 years, pregnant women, and nursing mothers. The National Nutrition Program for the Elderly makes meals available to many older Americans.

THE SITUATION IN THE MIDSEVENTIES

Scientifically there is no doubt that the food we eat is directly related to our state of health. Research in the mid-seventies continues to bear out the validity of the basic concepts of nutrition for nutrition education.

Food technology has increased the variety of food choices in the marketplace in terms of processed, prepared, and fabricated foods to the point where it would seem to be virtually impossible that a person could not select for himself a good diet from foods he will eat and enjoy.

Means of transportation have been improved to the point that the variety and abundance of food are available to people in every town and hamlet in the country.

Food assistance programs increase the purchasing power of those who do not have the money to purchase a good diet.

Educational techniques have been developed and demonstrated to be effective for passing on sound nutrition information and for motivating individuals to use it.

Communication is such that virtually everyone can be reached with nutrition education.

Good comprehensive nutrition education programs continue to be expensive because the development and maintenance of good eating habits take a long time.

A great many people in the United States have been influenced by sound nutrition education over the years. These people do choose and eat a good assortment of foods in amounts that are conducive to high levels of health and well-being. However, far too many do not.

One needs only to observe gatherings of people at schools, churches, offices, factories, ball games, vacation resorts, and the like to see that obesity exists at all age levels.

Studies reveal that far too many girls and women suffer from iron deficiency anemia and that other nutrition related malconditions exist among family members everywhere.

Schools continue to use the school feeding programs simply as a service instead of an educational tool. Nutritional goals of these programs are not consistent with current local eating patterns and so plate waste is extremely high and community members are aghast at the wastefulness of the program.

Observance in supermarkets and a few studies indicate that nutrient labeling is used to some extent by some people and not at all by many others.

The fact that food assistance programs are available to a great many people is no assurance that good diets will be purchased and eaten.

Why do such conditions exist? They exist in some part, at least, because to date the major emphasis in many nutrition programs is on making nutrition facts available. This has indeed been accomplished. There is a great wealth of nutrition information available in communities all over the country—some sound; some out of context. People, in trying to use these facts to their advantage, often distort their diets.

The emphasis needs to be on the development and maintenance of good food habits. Effecting changes in food habits where such changes are needed is difficult, very time consuming, and thus expensive. However, such changes are essential if nutrition education is to be successful in helping the majority of our people to achieve good nutritional health.

The goal can be stated in simple terms—to help all our people to learn to eat and enjoy a wide variety of foods and to eat all foods in moderation. To really achieve this goal, nutrition education must begin in the cradle and continue through the life cycle. Systematic, sequential programs in schools are essential.

We have made progress. We have a long way to go. Each new generation must be taught. The “going” may not be easy, but the advantages that have been demonstrated to be possible are so great that it is well worth the time, effort, and cost involved.

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Consumer and Food Economics Institute, Agricultural Research Service, U.S. Department of Agriculture
(The Secretary of Agriculture has determined that the publication of this periodical is necessary in the transaction
of the public business required by law of this Department. Use of funds for printing this periodical has been
approved by the Director of the Office of Management and Budget through June 30, 1979.)